CLAIMS

1. **(Currently Amended)** A method comprising:

receiving, at a client device for presentation to a user, a plurality of temporally non-contiguous portions of a streaming media file, wherein:

temporally non-contiguous portions consist of portions of a received streaming media file that are not adjacent to one another in terms of the temporal presentation of their content during playback, and

at least a first and a second of the temporally non-contiguous portions of the received streaming media file being encoded at different bit rates, wherein the first and second non-contiguous portions comprise video data and wherein a third non-contiguous portion comprises audio data; and

storing the plurality of temporally non-contiguous portions of the received streaming media file in a single cache file on the client device, wherein the act of storing comprises:

creating a plurality of media cache streams, each media cache stream being associated with a unique bit rate;

storing the first non-contiguous portion in a media cache stream associated with the bit rate of the first non-contiguous portion;

storing the second non-contiguous portion in a media cache stream associated with the bit rate of the second non-contiguous portion; and

storing the media cache streams in the cache file.

2. (Original) A method as defined in claim 1, wherein the first and second non-contiguous portions comprise video data.

3. (Canceled)

4. (Original) A method as defined in claim 1, wherein the cache file is stored in non-volatile memory.

5. (Canceled)

6. (Original) A method as defined in claim 1, wherein the act of storing comprises:

creating a first media cache stream associated with the bit rate of the first non-contiguous portion;

storing the first non-contiguous portion in a media cache segment of the first media segment stream;

creating a second media cache stream associated with the bit rate of the second non-contiguous portion;

storing the second non-contiguous portion in a media cache segment of the second media cache stream;

creating a byte cache index segment and a byte cache data segment for each media cache segment; and

storing the byte cache index segments and the byte cache data segments in the cache file.

7. (Currently Amended) A method comprising:

creating a plurality of media cache streams, each media cache stream being associated with a unique bit rate;

receiving a plurality of temporally non-contiguous portions of a streaming media file, wherein:

temporally non-contiguous portions consist of portions of a received streaming media file that are not adjacent to one another in terms of the temporal presentation of their content during playback

each temporally non-contiguous portion being associated with a unique temporal section of the streaming media file;

storing each temporally non-contiguous portion in a media cache segment of a media cache stream associated with a bit rate at which the temporally non-contiguous portion was encoded, at least two of the temporally non-contiguous portions being stored in media cache segments in different media cache streams;

storing each of the media cache streams in a single cache file.

8. (Original) A method as defined in claim 7, wherein the act of storing comprises:

creating a byte cache index segment and a byte cache data segment for each media cache segment; and

storing the byte cache index segments and the byte cache data segments in the cache file.

9. (Original) A method as defined in claim 7, wherein the act of storing comprises:

creating a byte cache index segment and a byte cache data segment for each segment; and

serializing the byte cache index segments and the byte cache data segments in the cache file.

10. (Original) A method as defined in claim 7, wherein the cache file is stored in a non-volatile manner.

11. (Currently Amended) A system comprising:

a processor;

a data storage module;

a caching module operable to receive and store a plurality of temporally non-contiguous portions of a streaming media file, the streaming media file including different data types, in a cache file in the data storage module, two or more of the plurality of temporally non-contiguous portions being encoded at different bit rates, wherein:

the caching module comprises processor executable code; and

the caching module is operable to:

create a plurality of media cache streams, each media cache stream being associated with a streamed media data type and a streamed media encoded bit rate; and

store each temporally non-contiguous portion of received streamed media data as a media cache segment in a media cache stream associated with the streamed media data type and a streamed media encoded bit rate of the temporally non-contiguous portion;

parse each media cache segment into a byte cache index segment and a byte cache data segment; and

store the byte cache index segments and the byte cache data segments in the cache file.

12. (Original) A system as defined in claim 11, wherein the data storage module comprises a non-volatile data storage device.

13. (Canceled)

14. (Original) A system as defined in claim 11, wherein the caching module comprises:

a media cache module operable:

to store each of the plurality of temporally non-contiguous portions as a media cache segment in one of a plurality of media cache streams; and

parse each media cache segment into a byte cache index segment and a byte cache data segment.

15. (Original) A system as defined in claim 11, wherein the caching module comprises:

a media cache module operable to:

store each of the plurality of temporally non-contiguous portions as a media cache segment in one of a plurality of media cache streams, each media cache stream being associated with a different bit rate; and

parse each media cache segment into a byte cache index segment and a byte cache data segment; and

a byte cache module operable to store the byte cache index segments and the byte cache data segments in the cache file.

16. (Original) A system as defined in claim 11, wherein the caching module comprises:

a media cache module operable to:

create a plurality of media cache streams, each media cache stream being associated with a unique bit rate; and

store each temporally non-contiguous portion as a media cache segment in a media cache stream associated with a bite rate at which the temporally non-contiguous portion was encoded; and

parse each media cache segment into a byte cache index segment and a byte cache data segment; and

a byte cache module operable to:

store the byte cache index segments and the byte cache data segments in the cache file.

17. (Original) A system as defined in claim 11, wherein the two or more of the plurality of temporally non-contiguous portions include a first video portion encoded at a first bit rate, a second video portion encoded at a second bit rate, and an audio portion, and wherein the first video portion, the second video portion, and the audio portion are stored in different media cache streams.

18. (Original) A system as defined in claim 11, wherein:

the streaming media file includes different data types; and

the caching module is operable to:

create a plurality of media cache streams, each media cache stream being associated with a streamed media data type and a streamed media encoded bit rate;

store each temporally non-contiguous portion of received streamed media data in a media cache stream associated with the streamed media data type and a streamed media encoded bit rate of the temporally non-contiguous portion; and

store the media cache streams in the cache file.

19. (Canceled)

20. (Original) A system as defined in claim 11, wherein the caching module is operable to:

store each of the plurality of temporally non-contiguous portions as a media cache segment in one of a plurality of media cache streams;

create a segment/stream map specifying the media cache segment and stream in which each temporally non-contiguous portion is stored; and

parse each media cache segment into a byte cache index segment and a byte cache data segment.

21. (Currently Amended) A computer-readable storage medium having computer-executable instructions for performing acts comprising:

storing, at a client for presentation to a user, a plurality of temporally non-contiguous portions of a streaming media file received from a streaming media source in a cache file, each of the plurality of temporally non-contiguous portions being encoded at a different bit rate, wherein the act of storing comprises:

receiving a first video portion of the streaming media file encoded at a first bit rate;

storing the first video portion in a media cache video stream associated with the first bit rate;

receiving a second video portion of the streaming media file encoded at a second bit rate;

storing the second video portion in a media cache video stream associated with the second bit rate;

receiving a third video portion of the streaming media file encoded at a first bit rate, the a third video portion being temporally non-contiguous from the first video portion;

storing the third video portion in the media cache video stream associated with the first bit rate;

receiving a first audio portion of the streaming media file; and

storing the first audio portion in a media cache audio stream; and

storing the audio and video media cache streams in a cache file.

22. (Proposed Amended) A computer-readable storage medium as defined in claim 21, wherein the act of storing comprises:

receiving a first video portion of the streaming media file encoded at a first bit rate;

storing the first video portion in a media cache video stream associated with the first bit rate;

receiving a second video portion of the streaming media file encoded at a second bit rate;

storing the second video portion in a media cache video stream associated with the second bit rate;

receiving a first audio portion of the streaming media file;

storing the first audio portion in a media cache audio stream; and

storing the audio and video media cache streams in a cache file.

23. (Canceled)

24. (Currently Amended) A computer-readable storage medium as defined in claim 21, wherein the act of storing comprises:

storing each of the temporally non-contiguous portions in a unique media cache segment;

forming at least two byte cache segments from each media cache segment; and

storing the byte cache segments in the cache file.

25. (Currently Amended) A computer-readable storage medium as defined in claim 21, wherein the act of storing comprises:

storing each of the temporally non-contiguous portions in at least two byte cache segments; and

storing the byte cache segments in the cache file.

26. (Withdrawn) A computer-readable medium having stored thereon a data structure, comprising:

a plurality of data pages including data representing a plurality of temporally non-contiguous portions of a streaming media file received from a streaming media source, at least two of the temporally non-contiguous portions being encoded at different bit rates.

27. (Withdrawn) A computer-readable medium having stored thereon a data structure, comprising:

a plurality of data pages storing one or more byte cache segments, each byte cache segment being derived from a temporally non-contiguous portion of a streaming media file, at least two of the temporally non-contiguous portions being encoded at different bit rates; and

a header page including information that describes one or more characteristics of the data pages.

28. (Withdrawn) A computer-readable medium as defined in claim 27, wherein the header page includes a plurality of cache file control records, each cache file control record including information describing the location of a single byte cache segment the data pages.

29. (Withdrawn) A computer-readable medium as defined in claim 27, wherein the header page includes a plurality of cache file control records, each cache file control record including information describing a location of a single byte cache segment within the data pages and information indicating a number of pages including the single byte cache record.

30. (Withdrawn) A computer-readable medium as defined in claim 27, wherein the header page includes a plurality of cache file control records, each cache file control record including information describing a beginning and an ending point of a single byte cache segment within the data pages.

31. (Withdrawn) A computer-readable medium as defined in claim 27, wherein:

the header page includes a plurality of cache file control records; and

at least one cache file control record includes an array including the location of each page within the cache file.

32. (Withdrawn) A computer-readable medium as defined in claim 27, wherein:

the header page includes a plurality of cache file control records; and

at least one cache file control record includes information indicating a page containing a beginning of a single byte cache segment and an index specifying a beginning of the single byte cache segment within the page.

33. (Withdrawn) A computer-readable medium as defined in claim 27, wherein:

the header page includes a plurality of cache file control records; and

at least one cache file control record includes information defining a beginning and ending locations of a single byte cache segment in the data pages.

34. (Withdrawn) A computer-readable medium as defined in claim 27, wherein the header page includes a plurality of cache file control records, each cache file control record being associated with a single byte cache segment, each cache file control record identifying a predetermined number of pages including at least a portion of the byte cache segment associated with the cache file control record, each cache file control record including a pointer to a page including information identifying a predetermined number of pages other than the predetermined number of pages including at least a portion of the byte cache segment associated with the cache file.

35. (Withdrawn) A computer-readable medium as defined in claim 27, wherein the header page includes:

a predetermined number of cache file control records, each cache file control record including information describing the location of a single byte cache segment in the data pages; and

a pointer to a cache file control record extension page including cache file control records other than the predetermined number of cache file control records.

36. (Currently Amended) A system comprising:

means for receiving a plurality of temporally non-contiguous portions of a streaming media file for presentation to a user, wherein temporally non-contiguous portions consist of portions of a received streaming media file that are not adjacent to one another in terms of the temporal presentation of their content during playback, and at least two of the plurality of temporally non-contiguous portions of the streaming media file are ~~being~~ encoded at a different bit rate, wherein the first and second non-contiguous portions comprise video data and wherein a third non-contiguous portion comprises audio data; and

means for associating and storing the plurality of temporally non-contiguous portions of the streaming media file in a data structure of a single cache file, wherein the act of storing comprises:

creating a plurality of media cache streams, each media cache stream being associated with a unique bit rate;

storing the first non-contiguous portion in a media cache stream associated with the bit rate of the first non-contiguous portion;

storing the second non-contiguous portion in a media cache stream associated with the bit rate of the second non-contiguous portion; and

storing the media cache streams in the cache file.